

**New Hampshire State Standards
correlated to
Merit Software Math Programs**

The Curriculum Standards identify the scope of the content recommended for grades K-3, 4-6, and 7-12. The Proficiency Standards identify specific expectations for the assessment of cumulative learning. They will serve as the basis for the development and ongoing revision of the mathematics assessment instruments to be administered statewide at the end of grades three, six, and ten. All of the Grade 3 Proficiency Standards found in the New Hampshire Mathematics Curriculum Framework: End of Grade Three (1993) are incorporated into this K-12 framework.

In accordance with RSA 193-C relative to the New Hampshire Educational Improvement and Assessment Program (NHEIAP), the purpose of this framework is to serve: (1) as the basis for the development of assessment instruments to be administered, statewide, at the end-of-grades three, six, and ten; and (2) as a guide for making local decisions about curriculum development and delivery.

Merit’s Math programs address the following New Hampshire State Standards:

Grades 3-6 pg. 1-34

Grades 3-6

Strand	Broad Goal	Curriculum Standard	Proficiency Standard	Merit Software
Problem Solving and Reasoning	1a. Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content.	Make up problems based on everyday experiences.	<ul style="list-style-type: none"> • Formulate problems from everyday and mathematical situations. • Solve problems that require the use of strategies (for example: making a list, drawing a picture, looking or a pattern, or acting out). • Solve problems with and without using manipulatives and calculators. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Problem Solving and Reasoning	1a. Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content.	Solve problems using a variety of strategies (for example: make a list, draw a picture, or guess and check). listening, and viewing to communicate effectively.	<ul style="list-style-type: none"> • Formulate problems from everyday and mathematical situations. • Solve problems that require the use of strategies (for example: making a list, drawing a picture, looking or a pattern, or acting out). • Solve problems with and without using manipulatives and calculators. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Problem Solving and Reasoning	1a. Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content.	Formulate and solve real-world problems.	<ul style="list-style-type: none"> • Formulate problems from everyday and mathematical situations. • Solve problems that require the use of strategies (for example: making a list, drawing a picture, looking or a pattern, or acting out). • Solve problems with and without using manipulatives and calculators. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Problem Solving and Reasoning	1a. Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content.	Verify and interpret results with respect to the original problem.	<ul style="list-style-type: none"> • Formulate problems from everyday and mathematical situations. • Solve problems that require the use of strategies (for example: making a list, drawing a picture, looking or a pattern, or acting out). • Solve problems with and without using manipulatives and calculators. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Problem Solving and Reasoning	1a. Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content.	Generalize solutions and apply strategies to new problem situations.	<ul style="list-style-type: none"> • Formulate problems from everyday and mathematical situations. • Solve problems that require the use of strategies (for example: making a list, drawing a picture, looking or a pattern, or acting out). • Solve problems with and without using manipulatives and calculators. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Problem Solving and Reasoning	1a. Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content.	Solve multi-step problems.	<ul style="list-style-type: none"> • Formulate problems from everyday and mathematical situations. • Solve problems that require the use of strategies (for example: making a list, drawing a picture, looking or a pattern, or acting out). • Solve problems with and without using manipulatives and calculators. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Problem Solving and Reasoning	1a. Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content.	Use problem solving approaches to investigate and understand new mathematical content, both independently and in groups.	<ul style="list-style-type: none"> • Formulate problems from everyday and mathematical situations. • Solve problems that require the use of strategies (for example: making a list, drawing a picture, looking or a pattern, or acting out). • Solve problems with and without using manipulatives and calculators. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Problem Solving and Reasoning	1a. Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content.	Demonstrate that a problem may be solved in more than one way.	<ul style="list-style-type: none"> • Formulate problems from everyday and mathematical situations. • Solve problems that require the use of strategies (for example: making a list, drawing a picture, looking or a pattern, or acting out). • Solve problems with and without using manipulatives and calculators. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Problem Solving and Reasoning	1a. Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content.	Display increasing perseverance, and persistence in problem solving.	<ul style="list-style-type: none"> • Formulate problems from everyday and mathematical situations. • Solve problems that require the use of strategies (for example: making a list, drawing a picture, looking or a pattern, or acting out). • Solve problems with and without using manipulatives and calculators. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Problem Solving and Reasoning	1a. Students will use problem-solving strategies to investigate and understand increasingly complex mathematical content.	Write about problem solutions and solution processes.	<ul style="list-style-type: none"> • Formulate problems from everyday and mathematical situations. • Solve problems that require the use of strategies (for example: making a list, drawing a picture, looking or a pattern, or acting out). • Solve problems with and without using manipulatives and calculators. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Problem Solving and Reasoning	1b. Students will use mathematical reasoning.	Draw conclusions using inductive reasoning.	<ul style="list-style-type: none"> Continue a number pattern. Identify the missing information needed to find a solution to a given story problem. Verify an answer to a problem. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Problem Solving and Reasoning	1b. Students will use mathematical reasoning.	Demonstrate belief that mathematics makes sense.	<ul style="list-style-type: none"> Continue a number pattern. Identify the missing information needed to find a solution to a given story problem. Verify an answer to a problem. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Communications and Connections	2a. Students will communicate their understanding of mathematics.	Relate everyday language to mathematical language and symbols.	<ul style="list-style-type: none"> Discuss (in writing) mathematical concepts and relationships. Draw pictures and use objects to illustrate mathematical concepts. Write about the mathematical topics presented. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Communications and Connections	2a. Students will communicate their understanding of mathematics.	Discuss, illustrate, and write about mathematical concepts and relationships.	<ul style="list-style-type: none"> Discuss (in writing) mathematical concepts and relationships. Draw pictures and use objects to illustrate mathematical concepts. Write about the mathematical topics presented. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Communications and Connections	2a. Students will communicate their understanding of mathematics.	Use language to reflect on, clarify, and articulate thinking about mathematical ideas and situations.	<ul style="list-style-type: none"> Discuss (in writing) mathematical concepts and relationships. Draw pictures and use objects to illustrate mathematical concepts. Write about the mathematical topics presented. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Communications and Connections	2b. Students will recognize, develop, and explore mathematical connections.	Understand the mathematical processes of addition, subtraction, and multiplication and relate them to one another.	<ul style="list-style-type: none"> • Demonstrate the relationship between addition and multiplication and between addition and subtraction. • Demonstrate the relationship between fractions and decimals. • Use probability and statistics to describe and predict simple events. • Use money in real-world situations. Use geometric representations for fractions and decimals and to explain arithmetic operations. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Communications and Connections	2b. Students will recognize, develop, and explore mathematical connections.	Recognize different representations of concepts and procedures (for example, students should recognize the relationship among seven counters, seven tally marks, and the symbol 7).	<ul style="list-style-type: none"> • Demonstrate the relationship between addition and multiplication and between addition and subtraction. • Demonstrate the relationship between fractions and decimals. • Use probability and statistics to describe and predict simple events. • Use money in real-world situations. Use geometric representations for fractions and decimals and to explain arithmetic operations. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Communications and Connections	2b. Students will recognize, develop, and explore mathematical connections.	Translate among different representations as appropriate.	<ul style="list-style-type: none"> • Demonstrate the relationship between addition and multiplication and between addition and subtraction. • Demonstrate the relationship between fractions and decimals. • Use probability and statistics to describe and predict simple events. • Use money in real-world situations. Use geometric representations for fractions and decimals and to explain arithmetic operations. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Communications and Connections	2b. Students will recognize, develop, and explore mathematical connections.	Recognize relationships among different topics in mathematics.	<ul style="list-style-type: none"> • Demonstrate the relationship between addition and multiplication and between addition and subtraction. • Demonstrate the relationship between fractions and decimals. • Use probability and statistics to describe and predict simple events. • Use money in real-world situations. Use geometric representations for fractions and decimals and to explain arithmetic operations. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Numbers, Numeration, Operations, and Number Theory	3a. Students will develop number sense and an understanding of our numeration system.	Order a set of numbers (0-99) from smallest to largest.	<ul style="list-style-type: none"> • Identify and write a 3-digit number given a physical model or an illustration of a place-value model, and given a 3-digit number, create a model. • Read and write three-digit whole numbers. • Identify the number 1000 as a unit or in various combinations of hundreds, tens, and ones. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Numbers, Numeration, Operations, and Number Theory	3a. Students will develop number sense and an understanding of our numeration system.	Name the whole number immediately before or after any 2-digit number.	<ul style="list-style-type: none"> • Identify and write a 3-digit number given a physical model or an illustration of a place-value model, and given a 3-digit number, create a model. • Read and write three-digit whole numbers. • Identify the number 1000 as a unit or in various combinations of hundreds, tens, and ones. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Numbers, Numeration, Operations, and Number Theory	3a. Students will develop number sense and an understanding of our numeration system.	Name the number that is ten units before or ten units after any 2-digit number.	<ul style="list-style-type: none"> • Identify and write a 3-digit number given a physical model or an illustration of a place-value model, and given a 3-digit number, create a model. • Read and write three-digit whole numbers. • Identify the number 1000 as a unit or in various combinations of hundreds, tens, and ones. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Numbers, Numeration, Operations, and Number Theory	3a. Students will develop number sense and an understanding of our numeration system.	Compare any two 2-digit numbers to determine which is greater or less.	<ul style="list-style-type: none"> • Identify and write a 3-digit number given a physical model or an illustration of a place-value model, and given a 3-digit number, create a model. • Read and write three-digit whole numbers. • Identify the number 1000 as a unit or in various combinations of hundreds, tens, and ones. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Numbers, Numeration, Operations, and Number Theory	3a. Students will develop number sense and an understanding of our numeration system.	Read and write whole numbers.	<ul style="list-style-type: none"> • Identify and write a 3-digit number given a physical model or an illustration of a place-value model, and given a 3-digit number, create a model. • Read and write three-digit whole numbers. • Identify the number 1000 as a unit or in various combinations of hundreds, tens, and ones. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Numbers, Numeration, Operations, and Number Theory	3a. Students will develop number sense and an understanding of our numeration system.	Show understanding of place value concepts via the use of physical models.	<ul style="list-style-type: none"> • Identify and write a 3-digit number given a physical model or an illustration of a place-value model, and given a 3-digit number, create a model. • Read and write three-digit whole numbers. • Identify the number 1000 as a unit or in various combinations of hundreds, tens, and ones. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Numbers, Numeration, Operations, and Number Theory	3a. Students will develop number sense and an understanding of our numeration system.	Recognize and demonstrate the difference in magnitude of whole numbers and fractions.	<ul style="list-style-type: none"> • Identify and write a 3-digit number given a physical model or an illustration of a place-value model, and given a 3-digit number, create a model. • Read and write three-digit whole numbers. • Identify the number 1000 as a unit or in various combinations of hundreds, tens, and ones. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Numbers, Numeration, Operations, and Number Theory	3a. Students will develop number sense and an understanding of our numeration system.	Demonstrate knowledge of differences in the use of ordinal and cardinal numbers.	<ul style="list-style-type: none"> • Identify and write a 3-digit number given a physical model or an illustration of a place-value model, and given a 3-digit number, create a model. • Read and write three-digit whole numbers. • Identify the number 1000 as a unit or in various combinations of hundreds, tens, and ones. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

<p>Numbers, Numeration, Operations, and Number Theory</p>	<p>3b. Students will understand the concepts of number operations.</p>	<p>Develop meaning for the operations of addition, subtraction, multiplication, and division by modeling and discussing a rich variety of problem situations.</p>	<ul style="list-style-type: none"> • Count by ones, twos, fives, and tens. • Identify even and odd numbers and explain the difference. • Use manipulatives and pictures to represent multiplication as repeated addition or arrays. • Use manipulatives and pictures to represent division as the sharing of objects and as the number of groups of shared objects. • Given a word problem, choose the appropriate operation or operations to solve it. • Explain the relationship among the four Basic Algebra Shape-Up Set 1 & 2 operations. 	<p>Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>
<p>Numbers, Numeration, Operations, and Number Theory</p>	<p>3b. Students will understand the concepts of number operations.</p>	<p>Demonstrate and explain the relationship between these operations.</p>	<ul style="list-style-type: none"> • Count by ones, twos, fives, and tens. • Identify even and odd numbers and explain the difference. • Use manipulatives and pictures to represent multiplication as repeated addition or arrays. • Use manipulatives and pictures to represent division as the sharing of objects and as the number of groups of shared objects. • Given a word problem, choose the appropriate operation or operations to solve it. • Explain the relationship among the four Basic Algebra Shape-Up Set 1 & 2 operations. 	<p>Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>

<p>Numbers, Numeration, Operations, and Number Theory</p>	<p>3b. Students will understand the concepts of number operations.</p>	<p>Relate the mathematical language and symbols to problem situations and informal language.</p>	<ul style="list-style-type: none"> • Count by ones, twos, fives, and tens. • Identify even and odd numbers and explain the difference. • Use manipulatives and pictures to represent multiplication as repeated addition or arrays. • Use manipulatives and pictures to represent division as the sharing of objects and as the number of groups of shared objects. • Given a word problem, choose the appropriate operation or operations to solve it. • Explain the relationship among the four Basic Algebra Shape-Up Set 1 & 2 operations. 	<p>Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>
<p>Numbers, Numeration, Operations, and Number Theory</p>	<p>3b. Students will understand the concepts of number operations.</p>	<p>Recognize that a wide range of problem situations can be represented by one expression.</p>	<ul style="list-style-type: none"> • Count by ones, twos, fives, and tens. • Identify even and odd numbers and explain the difference. • Use manipulatives and pictures to represent multiplication as repeated addition or arrays. • Use manipulatives and pictures to represent division as the sharing of objects and as the number of groups of shared objects. • Given a word problem, choose the appropriate operation or operations to solve it. • Explain the relationship among the four Basic Algebra Shape-Up Set 1 & 2 operations. 	<p>Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>

<p>Numbers, Numeration, Operations, and Number Theory</p>	<p>3b. Students will understand the concepts of number operations.</p>	<p>Recognize the effect of performing the operations of addition, subtraction, multiplication, and division with whole numbers.</p>	<ul style="list-style-type: none"> • Count by ones, twos, fives, and tens. • Identify even and odd numbers and explain the difference. • Use manipulatives and pictures to represent multiplication as repeated addition or arrays. • Use manipulatives and pictures to represent division as the sharing of objects and as the number of groups of shared objects. • Given a word problem, choose the appropriate operation or operations to solve it. • Explain the relationship among the four Basic Algebra Shape-Up Set 1 & 2 operations. 	<p>Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>
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<p>Numbers, Numeration, Operations, and Number Theory</p>	<p>3c. Students will compute.</p>	<p>Model, explain, and develop proficiency with Basic Algebra Shape-Up Set 1 & 2 facts and algorithms.</p>	<ul style="list-style-type: none"> • Using physical models and illustrations, determine the sum or difference of fractions with like or unlike denominators. • Using physical models and illustrations, determine the sum or difference of decimals. • Develop and use algorithms to add and subtract decimals. • Subtract any two 2-digit numbers. • Use manipulatives to illustrate an algorithm for adding or subtracting whole numbers less than 1,000. • Add two or more whole numbers less than 1000. 	<p>Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>
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<p>Numbers, Numeration, Operations, and Number Theory</p>	<p>3c. Students will compute.</p>	<p>Use a variety of mental computation and estimation techniques.</p>	<ul style="list-style-type: none"> • Using physical models and illustrations, determine the sum or difference of fractions with like or unlike denominators. • Using physical models and illustrations, determine the sum or difference of decimals. • Develop and use algorithms to add and subtract decimals. • Subtract any two 2-digit numbers. • Use manipulatives to illustrate an algorithm for adding or subtracting whole numbers less than 1,000. • Add two or more whole numbers less than 1000. 	<p>Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>
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Numbers, Numeration, Operations, and Number Theory	3c. Students will compute.	Given a problem, select appropriate computational techniques to solve the problem and determine the reasonableness of the result.	<ul style="list-style-type: none"> • Using physical models and illustrations, determine the sum or difference of fractions with like or unlike denominators. • Using physical models and illustrations, determine the sum or difference of decimals. • Develop and use algorithms to add and subtract decimals. • Subtract any two 2-digit numbers. • Use manipulatives to illustrate an algorithm for adding or subtracting whole numbers less than 1,000. • Add two or more whole numbers less than 1000. 	Fraction Shape-Up; Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry, Measurement, and Trigonometry	4a. Students will name, describe, model, classify, and compare geometric shapes and their properties with an emphasis on their wide applicability in human activity.	Name, model, describe, and classify cubes, spheres, cones, cylinders, pyramids, and rectangular solids.	<ul style="list-style-type: none"> • Use the terms points, lines, and line segments in describing two dimensional figures. • Draw line segments and lines. • Draw lines of symmetry. • Identify, describe, and draw a kite. • Identify and describe pyramids. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Geometry, Measurement, and Trigonometry	4a. Students will name, describe, model, classify, and compare geometric shapes and their properties with an emphasis on their wide applicability in human activity.	Name, model, describe, and classify circles, rectangles, squares, triangles, trapezoids, parallelograms, kites, and rhombuses (diamonds).	<ul style="list-style-type: none"> • Use the terms points, lines, and line segments in describing two dimensional figures. • Draw line segments and lines. • Draw lines of symmetry. • Identify, describe, and draw a kite. • Identify and describe pyramids. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Geometry, Measurement, and Trigonometry	4c. Students will develop an understanding of measurement and systems of measurement through experiences which enable them to use a variety of techniques, tools, and units of measurement to describe and analyze quantifiable phenomena.	Develop measuring skills.	<ul style="list-style-type: none"> • Measure line segments to the nearest half inch and quarter inch and to the nearest centimeter. • Investigate the measure of perimeters. • Add units of length that may or may not require regrouping of inches to feet or centimeters to meters. • Estimate capacity using quarts, gallons, or liters. • Given a standard unit, estimate and measure the area of a rectangular region. • Given a standard unit, estimate the area of any region. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

<p>Geometry, Measurement, and Trigonometry</p>	<p>4c. Students will develop an understanding of measurement and systems of measurement through experiences which enable them to use a variety of techniques, tools, and units of measurement to describe and analyze quantifiable phenomena.</p>	<p>Investigate the attributes of length, area, capacity, volume, and weight using standard (metric and English) and nonstandard units of measure.</p>	<ul style="list-style-type: none"> • Measure line segments to the nearest half inch and quarter inch and to the nearest centimeter. • Investigate the measure of perimeters. • Add units of length that may or may not require regrouping of inches to feet or centimeters to meters. • Estimate capacity using quarts, gallons, or liters. • Given a standard unit, estimate and measure the area of a rectangular region. • Given a standard unit, estimate the area of any region. 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>
<p>Geometry, Measurement, and Trigonometry</p>	<p>4c. Students will develop an understanding of measurement and systems of measurement through experiences which enable them to use a variety of techniques, tools, and units of measurement to describe and analyze quantifiable phenomena.</p>	<p>Develop the concepts of perimeter and area.</p>	<ul style="list-style-type: none"> • Measure line segments to the nearest half inch and quarter inch and to the nearest centimeter. • Investigate the measure of perimeters. • Add units of length that may or may not require regrouping of inches to feet or centimeters to meters. • Estimate capacity using quarts, gallons, or liters. • Given a standard unit, estimate and measure the area of a rectangular region. • Given a standard unit, estimate the area of any region. 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>

<p>Geometry, Measurement, and Trigonometry</p>	<p>4c. Students will develop an understanding of measurement and systems of measurement through experiences which enable them to use a variety of techniques, tools, and units of measurement to describe and analyze quantifiable phenomena.</p>	<p>Make and use estimates of measurements.</p>	<ul style="list-style-type: none"> • Measure line segments to the nearest half inch and quarter inch and to the nearest centimeter. • Investigate the measure of perimeters. • Add units of length that may or may not require regrouping of inches to feet or centimeters to meters. • Estimate capacity using quarts, gallons, or liters. • Given a standard unit, estimate and measure the area of a rectangular region. • Given a standard unit, estimate the area of any region. 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>
<p>Geometry, Measurement, and Trigonometry</p>	<p>4c. Students will develop an understanding of measurement and systems of measurement through experiences which enable them to use a variety of techniques, tools, and units of measurement to describe and analyze quantifiable phenomena.</p>	<p>Develop measuring skills.</p>	<ul style="list-style-type: none"> • Measure line segments to the nearest half inch and quarter inch and to the nearest centimeter. • Investigate the measure of perimeters. • Add units of length that may or may not require regrouping of inches to feet or centimeters to meters. • Estimate capacity using quarts, gallons, or liters. • Given a standard unit, estimate and measure the area of a rectangular region. • Given a standard unit, estimate the area of any region. 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up</p>

Data Analysis, Statistics, and Probability	5a. Students will use data analysis, statistics and probability to analyze given situations and the outcomes of experiments.	Collect, organize, describe, and interpret data.	<ul style="list-style-type: none"> Collect data, construct, and interpret picture and bar graphs. Given appropriate information, determine which is most likely to happen or whether one event is more likely than another. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Statistics, and Probability	5a. Students will use data analysis, statistics and probability to analyze given situations and the outcomes of experiments.	Formulate and solve problems that involve collecting, organizing, and analyzing data.	<ul style="list-style-type: none"> Collect data, construct, and interpret picture and bar graphs. Given appropriate information, determine which is most likely to happen or whether one event is more likely than another. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Statistics, and Probability	5a. Students will use data analysis, statistics and probability to analyze given situations and the outcomes of experiments.	Predict outcomes and carry out simple activities involving probability.	<ul style="list-style-type: none"> Collect data, construct, and interpret picture and bar graphs. Given appropriate information, determine which is most likely to happen or whether one event is more likely than another. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Statistics, and Probability	5a. Students will use data analysis, statistics and probability to analyze given situations and the outcomes of experiments.	Determine which event is most likely or least likely to happen, given appropriate information.	<ul style="list-style-type: none"> Collect data, construct, and interpret picture and bar graphs. Given appropriate information, determine which is most likely to happen or whether one event is more likely than another. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Data Analysis, Statistics, and Probability	5a. Students will use data analysis, statistics and probability to analyze given situations and the outcomes of experiments.	Collect, organize, describe, represent, and interpret data in both simulations and real world situations.	<ul style="list-style-type: none"> Collect data, construct, and interpret picture and bar graphs. Given appropriate information, determine which is most likely to happen or whether one event is more likely than another. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Statistics, and Probability	5a. Students will use data analysis, statistics and probability to analyze given situations and the outcomes of experiments.	Simulate, display, graph, and analyze data using technology and other means.	<ul style="list-style-type: none"> Collect data, construct, and interpret picture and bar graphs. Given appropriate information, determine which is most likely to happen or whether one event is more likely than another. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Statistics, and Probability	5a. Students will use data analysis, statistics and probability to analyze given situations and the outcomes of experiments.	Investigate and explore mean, median, and mode.	<ul style="list-style-type: none"> Collect data, construct, and interpret picture and bar graphs. Given appropriate information, determine which is most likely to happen or whether one event is more likely than another. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Statistics, and Probability	5a. Students will use data analysis, statistics and probability to analyze given situations and the outcomes of experiments.	Investigate and explore the Basic Algebra Shape-Up Set 1 & 2 elements of sampling.	<ul style="list-style-type: none"> Collect data, construct, and interpret picture and bar graphs. Given appropriate information, determine which is most likely to happen or whether one event is more likely than another. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up

Data Analysis, Statistics, and Probability	5a. Students will use data analysis, statistics and probability to analyze given situations and the outcomes of experiments.	Make predictions, inferences, and decisions based on interpretation of data.	<ul style="list-style-type: none"> Collect data, construct, and interpret picture and bar graphs. Given appropriate information, determine which is most likely to happen or whether one event is more likely than another. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Statistics, and Probability	5a. Students will use data analysis, statistics and probability to analyze given situations and the outcomes of experiments.	Demonstrate an ability to read and interpret statistical data presented in text.	<ul style="list-style-type: none"> Collect data, construct, and interpret picture and bar graphs. Given appropriate information, determine which is most likely to happen or whether one event is more likely than another. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Data Analysis, Statistics, and Probability	5a. Students will use data analysis, statistics and probability to analyze given situations and the outcomes of experiments.	Explore situations involving probability.	<ul style="list-style-type: none"> Collect data, construct, and interpret picture and bar graphs. Given appropriate information, determine which is most likely to happen or whether one event is more likely than another. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up
Functions, Relations and Algebra	6a. Students will recognize patterns and describe and represent relations and functions with tables, graphs, equations and rules, and analyze how a change in one element results in a change in another.	Use concrete models to create a pattern, describe the pattern, and represent the pattern symbolically in a table.	<ul style="list-style-type: none"> Recognize and describe patterns that involve numbers and shapes. Create patterns. Write an open sentence (equation) to express a relationship. Generalize simple patterns using words. Extend a pattern using models. Identify properties and relationships related to prime numbers, composite numbers, rational numbers, multiples, factors, and exponents. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

Functions, Relations and Algebra	6a. Students will recognize patterns and describe and represent relations and functions with tables, graphs, equations and rules, and analyze how a change in one element results in a change in another.	Recognize, describe, extend, and create a wide variety of patterns.	<ul style="list-style-type: none"> • Recognize and describe patterns that involve numbers and shapes. • Create patterns. • Write an open sentence (equation) to express a relationship. • Generalize simple patterns using words. • Extend a pattern using models. • Identify properties and relationships related to prime numbers, composite numbers, rational numbers, multiples, factors, and exponents. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2
Functions, Relations and Algebra	6a. Students will recognize patterns and describe and represent relations and functions with tables, graphs, equations and rules, and analyze how a change in one element results in a change in another.	Represent and describe mathematical relationships.	<ul style="list-style-type: none"> • Recognize and describe patterns that involve numbers and shapes. • Create patterns. • Write an open sentence (equation) to express a relationship. • Generalize simple patterns using words. • Extend a pattern using models. • Identify properties and relationships related to prime numbers, composite numbers, rational numbers, multiples, factors, and exponents. 	Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2

<p>Functions, Relations and Algebra</p>	<p>6a. Students will recognize patterns and describe and represent relations and functions with tables, graphs, equations and rules, and analyze how a change in one element results in a change in another.</p>	<p>Explore the use of variables and open sentences to express relationships.</p>	<ul style="list-style-type: none"> • Recognize and describe patterns that involve numbers and shapes. • Create patterns. • Write an open sentence (equation) to express a relationship. • Generalize simple patterns using words. • Extend a pattern using models. • Identify properties and relationships related to prime numbers, composite numbers, rational numbers, multiples, factors, and exponents. 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>
<p>Functions, Relations and Algebra</p>	<p>6a. Students will recognize patterns and describe and represent relations and functions with tables, graphs, equations and rules, and analyze how a change in one element results in a change in another.</p>	<p>Discover patterns or relationships from graphical representations.</p>	<ul style="list-style-type: none"> • Recognize and describe patterns that involve numbers and shapes. • Create patterns. • Write an open sentence (equation) to express a relationship. • Generalize simple patterns using words. • Extend a pattern using models. • Identify properties and relationships related to prime numbers, composite numbers, rational numbers, multiples, factors, and exponents. 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>

<p>Functions, Relations and Algebra</p>	<p>6b. Students will use algebraic concepts and processes to represent situations that involve variable quantities with expressions, equations, inequalities, matrices and graphs.</p>	<p>Represent situations and number patterns with concrete materials, tables, graphs, verbal rules, and equations; and translate from one to another.</p>	<ul style="list-style-type: none"> • Use recall of number facts to solve simple equations (for example, $4 + _ = 9$ may be solved by remembering the fact that $4 + 5$ is 9). • Write the number pattern described by a written or verbal rule. • Illustrate the commutative and associative laws of addition and the commutative law of multiplication with manipulatives. • Solve simple linear equations using concrete, informal methods. • Given a table or graph, select a sentence describing the underlying relationship(s). 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>
<p>Functions, Relations and Algebra</p>	<p>6b. Students will use algebraic concepts and processes to represent situations that involve variable quantities with expressions, equations, inequalities, matrices and graphs.</p>	<p>Develop an understanding of commutative and associative properties.</p>	<ul style="list-style-type: none"> • Use recall of number facts to solve simple equations (for example, $4 + _ = 9$ may be solved by remembering the fact that $4 + 5$ is 9). • Write the number pattern described by a written or verbal rule. • Illustrate the commutative and associative laws of addition and the commutative law of multiplication with manipulatives. • Solve simple linear equations using concrete, informal methods. • Given a table or graph, select a sentence describing the underlying relationship(s). 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>

<p>Functions, Relations and Algebra</p>	<p>6b. Students will use algebraic concepts and processes to represent situations that involve variable quantities with expressions, equations, inequalities, matrices and graphs.</p>	<p>Write and solve open sentences that describe everyday situations.</p>	<ul style="list-style-type: none"> • Use recall of number facts to solve simple equations (for example, $4 + _ = 9$ may be solved by remembering the fact that $4 + 5$ is 9). • Write the number pattern described by a written or verbal rule. • Illustrate the commutative and associative laws of addition and the commutative law of multiplication with manipulatives. • Solve simple linear equations using concrete, informal methods. • Given a table or graph, select a sentence describing the underlying relationship(s). 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>
<p>Functions, Relations and Algebra</p>	<p>6b. Students will use algebraic concepts and processes to represent situations that involve variable quantities with expressions, equations, inequalities, matrices and graphs.</p>	<p>Represent situations and number patterns with concrete materials, tables, graphs, verbal rules, and standard algebraic notation.</p>	<ul style="list-style-type: none"> • Use recall of number facts to solve simple equations (for example, $4 + _ = 9$ may be solved by remembering the fact that $4 + 5$ is 9). • Write the number pattern described by a written or verbal rule. • Illustrate the commutative and associative laws of addition and the commutative law of multiplication with manipulatives. • Solve simple linear equations using concrete, informal methods. • Given a table or graph, select a sentence describing the underlying relationship(s). 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>

<p>Functions, Relations and Algebra</p>	<p>6b. Students will use algebraic concepts and processes to represent situations that involve variable quantities with expressions, equations, inequalities, matrices and graphs.</p>	<p>Understand the use of literal variables, expressions, equations, and inequalities.</p>	<ul style="list-style-type: none"> • Use recall of number facts to solve simple equations (for example, $4 + _ = 9$ may be solved by remembering the fact that $4 + 5$ is 9). • Write the number pattern described by a written or verbal rule. • Illustrate the commutative and associative laws of addition and the commutative law of multiplication with manipulatives. • Solve simple linear equations using concrete, informal methods. • Given a table or graph, select a sentence describing the underlying relationship(s). 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>
<p>Functions, Relations and Algebra</p>	<p>6b. Students will use algebraic concepts and processes to represent situations that involve variable quantities with expressions, equations, inequalities, matrices and graphs.</p>	<p>Analyze tables and graphs to identify algebraic relationships.</p>	<ul style="list-style-type: none"> • Use recall of number facts to solve simple equations (for example, $4 + _ = 9$ may be solved by remembering the fact that $4 + 5$ is 9). • Write the number pattern described by a written or verbal rule. • Illustrate the commutative and associative laws of addition and the commutative law of multiplication with manipulatives. • Solve simple linear equations using concrete, informal methods. • Given a table or graph, select a sentence describing the underlying relationship(s). 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>

<p>Functions, Relations and Algebra</p>	<p>6b. Students will use algebraic concepts and processes to represent situations that involve variable quantities with expressions, equations, inequalities, matrices and graphs.</p>	<p>Solve simple linear equations using informal, graphical, and concrete methods.</p>	<ul style="list-style-type: none"> • Use recall of number facts to solve simple equations (for example, $4 + _ = 9$ may be solved by remembering the fact that $4 + 5$ is 9). • Write the number pattern described by a written or verbal rule. • Illustrate the commutative and associative laws of addition and the commutative law of multiplication with manipulatives. • Solve simple linear equations using concrete, informal methods. • Given a table or graph, select a sentence describing the underlying relationship(s). 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>
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<p>Mathematics of Change</p>	<p>7a. Students will be able to use concepts about mathematical change in analyzing patterns, graphs, and applied situations.</p>	<p>Record data in situations where change is occurring.</p>	<ul style="list-style-type: none"> • Describe the term by term change in a pattern (for example, given a number pattern: describe the rule that was used, determine the next term and explain the reasoning used). • Given two patterns, describe how they are similar. • Given two patterns, describe how they are different. • Recognize and extend sequences of number and geometric patterns. • Describe and interpret change from graphs and/or tables of data. • Find averages (for example: batting averages, or grade point averages) and compute rates in familiar contexts (for example: soft drink consumption, distance per unit of time, hourly wages , or paint mixing). 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>
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<p>Mathematics of Change</p>	<p>7a. Students will be able to use concepts about mathematical change in analyzing patterns, graphs, and applied situations.</p>	<p>Notice similarities and differences between patterns, in numerical and geometric situations.</p>	<ul style="list-style-type: none"> • Describe the term by term change in a pattern (for example, given a number pattern: describe the rule that was used, determine the next term and explain the reasoning used). • Given two patterns, describe how they are similar. • Given two patterns, describe how they are different. • Recognize and extend sequences of number and geometric patterns. • Describe and interpret change from graphs and/or tables of data. • Find averages (for example: batting averages, or grade point averages) and compute rates in familiar contexts (for example: soft drink consumption, distance per unit of time, hourly wages , or paint mixing). 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>
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<p>Mathematics of Change</p>	<p>7a. Students will be able to use concepts about mathematical change in analyzing patterns, graphs, and applied situations.</p>	<p>Observe and describe term by term change in patterns.</p>	<ul style="list-style-type: none"> • Describe the term by term change in a pattern (for example, given a number pattern: describe the rule that was used, determine the next term and explain the reasoning used). • Given two patterns, describe how they are similar. • Given two patterns, describe how they are different. • Recognize and extend sequences of number and geometric patterns. • Describe and interpret change from graphs and/or tables of data. • Find averages (for example: batting averages, or grade point averages) and compute rates in familiar contexts (for example: soft drink consumption, distance per unit of time, hourly wages , or paint mixing). 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>
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<p>Mathematics of Change</p>	<p>7a. Students will be able to use concepts about mathematical change in analyzing patterns, graphs, and applied situations.</p>	<p>Compare growth patterns.</p>	<ul style="list-style-type: none"> • Describe the term by term change in a pattern (for example, given a number pattern: describe the rule that was used, determine the next term and explain the reasoning used). • Given two patterns, describe how they are similar. • Given two patterns, describe how they are different. • Recognize and extend sequences of number and geometric patterns. • Describe and interpret change from graphs and/or tables of data. • Find averages (for example: batting averages, or grade point averages) and compute rates in familiar contexts (for example: soft drink consumption, distance per unit of time, hourly wages , or paint mixing). 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>
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<p>Mathematics of Change</p>	<p>7a. Students will be able to use concepts about mathematical change in analyzing patterns, graphs, and applied situations.</p>	<p>Explore sequences involving number and geometric patterns.</p>	<ul style="list-style-type: none"> • Describe the term by term change in a pattern (for example, given a number pattern: describe the rule that was used, determine the next term and explain the reasoning used). • Given two patterns, describe how they are similar. • Given two patterns, describe how they are different. • Recognize and extend sequences of number and geometric patterns. • Describe and interpret change from graphs and/or tables of data. • Find averages (for example: batting averages, or grade point averages) and compute rates in familiar contexts (for example: soft drink consumption, distance per unit of time, hourly wages , or paint mixing). 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>
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<p>Mathematics of Change</p>	<p>7a. Students will be able to use concepts about mathematical change in analyzing patterns, graphs, and applied situations.</p>	<p>Interpret and compare rates of change by looking at graphs.</p>	<ul style="list-style-type: none"> • Describe the term by term change in a pattern (for example, given a number pattern: describe the rule that was used, determine the next term and explain the reasoning used). • Given two patterns, describe how they are similar. • Given two patterns, describe how they are different. • Recognize and extend sequences of number and geometric patterns. • Describe and interpret change from graphs and/or tables of data. • Find averages (for example: batting averages, or grade point averages) and compute rates in familiar contexts (for example: soft drink consumption, distance per unit of time, hourly wages , or paint mixing). 	<p>Word Problem Shape-Up Set 1, 2, 3; Pre-Algebra Shape-Up; Basic Algebra Shape-Up Set 1 & 2</p>
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